



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R944CHDSL 31224 (S/N 025783-791)
Component
Right Final Drive
Fluid
GEAR OIL SAE 80W90 (1 QTS)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0950513	WC0905401	WC0733325
Sample Date		Client Info		08 Jul 2024	08 Feb 2024	20 Dec 2023
Machine Age	hrs	Client Info		12892	12663	12505
Oil Age	hrs	Client Info		500	250	1250
Filter Age	hrs	Client Info		500	0	1250
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE

WEAR

Gear wear is indicated.

Iron	ppm	ASTM D5185m	>500	▲ 740	▲ 578	▲ 1836
Chromium	ppm	ASTM D5185m	>10	7	4	▲ 22
Nickel	ppm	ASTM D5185m	>10	2	<1	5
Titanium	ppm	ASTM D5185m		1	<1	8
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	● 22	● 24	● 126
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>50	33	33	▲ 78
Tin	ppm	ASTM D5185m	>10	<1	2	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

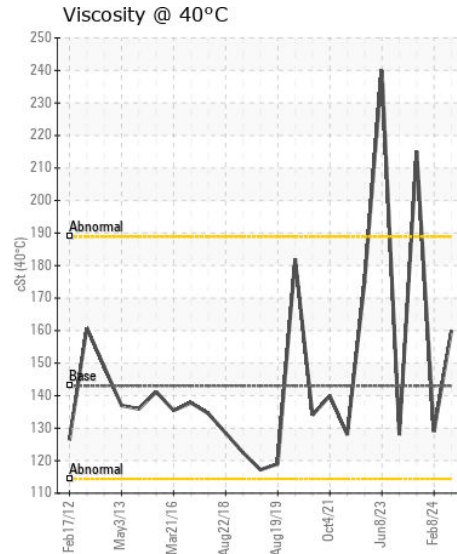
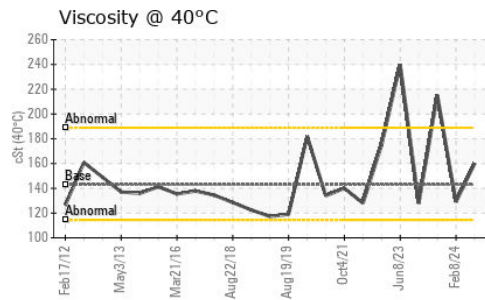
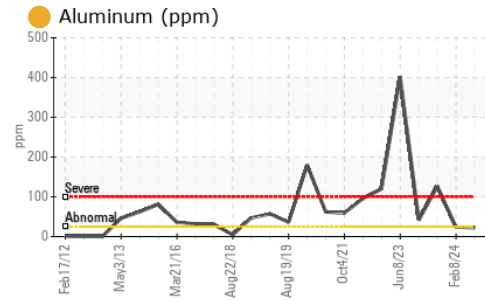
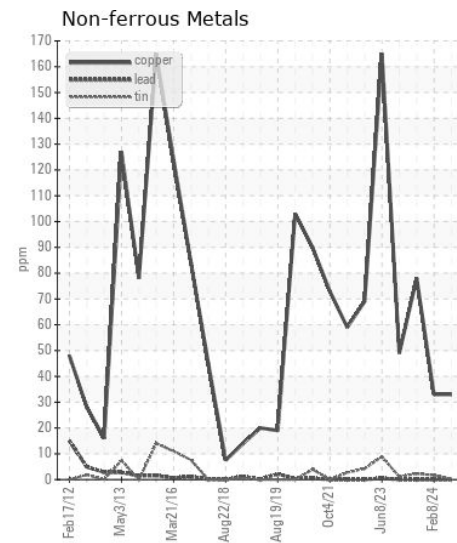
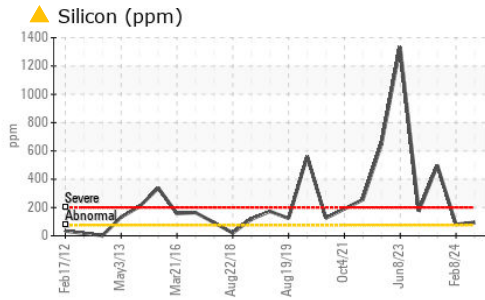
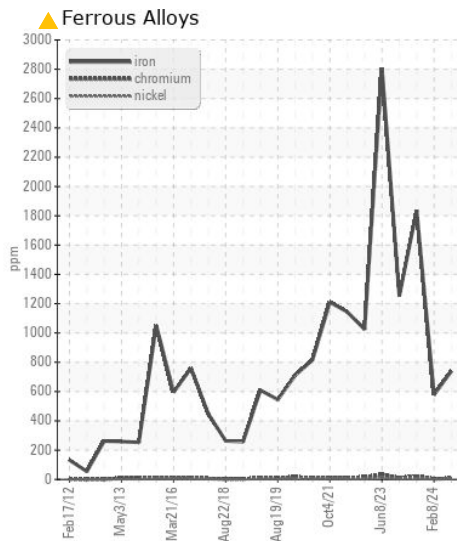
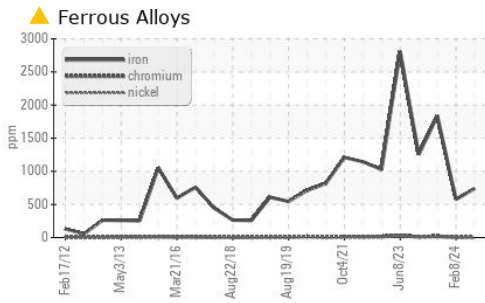
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>75	▲ 95	▲ 81	▲ 497
Potassium	ppm	ASTM D5185m	>20	5	5	30
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	0.2%

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>170	7	4	18
Boron	ppm	ASTM D5185m	400	25	38	30
Barium	ppm	ASTM D5185m	200	0	0	0
Molybdenum	ppm	ASTM D5185m	12	4	8	2
Manganese	ppm	ASTM D5185m		6	4	14
Magnesium	ppm	ASTM D5185m	12	8	29	18
Calcium	ppm	ASTM D5185m	150	40	77	46
Phosphorus	ppm	ASTM D5185m	1650	2296	2418	1931
Zinc	ppm	ASTM D5185m	125	37	72	20
Sulfur	ppm	ASTM D5185m	22500	26502	18373	29268
Visc @ 40°C	cSt	ASTM D445	143	160	129	215



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0950513
Lab Number : 06233642
Unique Number : 11117135
Test Package : CONST
Received : 11 Jul 2024
Tested : 12 Jul 2024
Diagnosed : 13 Jul 2024 - Don Baldridge

SULLIVAN EASTERN INC-LIEBHERR
 2860 C SLATER RD
 MORRISVILLE, NC
 US 27560
 Contact: CHRIS CALTON

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)